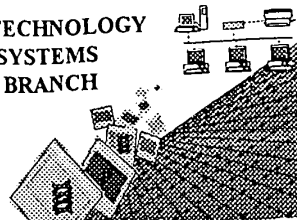


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BIOTECHNOLOGY  
SYSTEMS  
BRANCH



**RAW SEQUENCE LISTING  
ERROR REPORT**

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/857,815A  
Source: 1600  
Date Processed by STIC: 3/18/2002

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.  
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FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.  
PATENTIN 2.1 e-mail help: [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or phone 703-306-4119 (R. Wax)  
PATENTIN 3.0 e-mail help: [patin3help@uspto.gov](mailto:patin3help@uspto.gov) or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER  
VERSION 3.1 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND  
TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:  
<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail. Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom. Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. Hand Carry directly to:  
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7<sup>th</sup> Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202  
Or  
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

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## RAW SEQUENCE LISTING

DATE: 03/18/2002

PATENT APPLICATION: US/09/857,815A

TIME: 15:23:24

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Output Set: N:\CRF3\03182002\I857815A.raw

3 <110> APPLICANT: Takeda Chemical Industries, Ltd.  
 5 <120> TITLE OF INVENTION: Betacellulin Mutein  
 7 <130> FILE REFERENCE: P2001-232  
 C--> 9 <140> CURRENT APPLICATION NUMBER: US/09/857,815A  
 C--> 9 <141> CURRENT FILING DATE: 2002-03-05  
 9 <150> PRIOR APPLICATION NUMBER: JP 10-350377  
 10 <151> PRIOR FILING DATE: 1998-12-09  
 12 <150> PRIOR APPLICATION NUMBER: JP 11-55326  
 13 <151> PRIOR FILING DATE: 1999-03-03  
 15 <160> NUMBER OF SEQ ID NOS: 56  
 17 <210> SEQ ID NO: 1  
 18 <211> LENGTH: 77  
 19 <212> TYPE: PRT  
 20 <213> ORGANISM: Human  
 22 <400> SEQUENCE: 1  
 23 Asp Gly Asn Ser Thr Arg Ser Pro Glu Thr Asn Gly Leu Leu Cys Gly  
 24 1 5 10 15  
 25 Asp Pro Glu Glu Asn Cys Ala Ala Thr Thr Thr Gln Ser Lys Arg Lys  
 26 20 25 30  
 27 Gly His Phe Ser Arg Cys Pro Lys Gln Tyr Lys His Tyr Cys Ile Lys  
 28 35 40 45  
 29 Gly Arg Cys Arg Phe Val Val Ala Glu Gln Thr Pro Ser Cys Val Cys  
 30 50 55 60  
 31 Asp Glu Gly Tyr Ile Gly Ala Arg Cys Glu Arg Val Asp  
 32 65 70 75  
 34 <210> SEQ ID NO: 2  
 35 <211> LENGTH: 76  
 36 <212> TYPE: PRT  
 37 <213> ORGANISM: Human  
 39 <400> SEQUENCE: 2  
 40 Asp Gly Asn Ser Thr Arg Ser Pro Glu Thr Asn Gly Leu Leu Cys Gly  
 41 1 5 10 15  
 42 Asp Pro Glu Glu Asn Cys Ala Ala Thr Thr Thr Gln Ser Lys Arg Lys  
 43 20 25 30  
 44 Gly His Phe Ser Arg Cys Pro Lys Gln Tyr Lys His Tyr Cys Ile Lys  
 45 35 40 45  
 46 Gly Arg Cys Arg Phe Val Val Ala Glu Gln Thr Pro Ser Cys Val Cys  
 47 50 55 60  
 48 Asp Glu Gly Tyr Ile Gly Ala Arg Cys Glu Arg Val  
 49 65 70 75  
 51 <210> SEQ ID NO: 3  
 52 <211> LENGTH: 47  
 53 <212> TYPE: PRT

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/857,815A

DATE: 03/18/2002

TIME: 15:23:24

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Output Set: N:\CRF3\03182002\I857815A.raw

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54 <213> ORGANISM: Human
56 <400> SEQUENCE: 3
57 Arg Lys Gly His Phe Ser Arg Cys Pro Lys Gln Tyr Lys His Tyr Cys
58 1 5 10 15
59 Ile Lys Gly Arg Cys Arg Phe Val Val Ala Glu Gln Thr Pro Ser Cys
60 20 25 30
61 Val Cys Asp Glu Gly Tyr Ile Gly Ala Arg Cys Glu Arg Val Asp
62 35 40 45
64 <210> SEQ ID NO: 4
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66 <212> TYPE: PRT
67 <213> ORGANISM: Human
69 <400> SEQUENCE: 4
70 Arg Lys Gly His Phe Ser Arg Cys Pro Lys Gln Tyr Lys His Tyr Cys
71 1 5 10 15
72 Ile Lys Gly Arg Cys Arg Phe Val Val Ala Glu Gln Thr Pro Ser Cys
73 20 25 30
74 Val Cys Asp Glu Gly Tyr Ile Gly Ala Arg Cys Glu Arg Val
75 35 40 45
77 <210> SEQ ID NO: 5
78 <211> LENGTH: 79
79 <212> TYPE: PRT
80 <213> ORGANISM: Artificial sequence
82 <220> FEATURE:
83 <223> OTHER INFORMATION: amino acid sequence of betacellulin mutein (BTC 1-76, 78-80)
85 <400> SEQUENCE: 5
86 Asp Gly Asn Ser Thr Arg Ser Pro Glu Thr Asn Gly Leu Leu Cys Gly
87 1 5 10 15
88 Asp Pro Glu Glu Asn Cys Ala Ala Thr Thr Thr Gln Ser Lys Arg Lys
89 20 25 30
90 Gly His Phe Ser Arg Cys Pro Lys Gln Tyr Lys His Tyr Cys Ile Lys
91 35 40 45
92 Gly Arg Cys Arg Phe Val Val Ala Glu Gln Thr Pro Ser Cys Val Cys
93 50 55 60
94 Asp Glu Gly Tyr Ile Gly Ala Arg Cys Glu Arg Val Leu Phe Tyr
95 65 70 75
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98 <211> LENGTH: 78
99 <212> TYPE: PRT
100 <213> ORGANISM: Artificial sequence
102 <220> FEATURE:
103 <223> OTHER INFORMATION: amino acid sequence of betacellulin mutein (BTC 1-76, 78,
79)
105 <400> SEQUENCE: 6
106 Asp Gly Asn Ser Thr Arg Ser Pro Glu Thr Asn Gly Leu Leu Cys Gly
107 1 5 10 15
108 Asp Pro Glu Glu Asn Cys Ala Ala Thr Thr Thr Gln Ser Lys Arg Lys
109 20 25 30
110 Gly His Phe Ser Arg Cys Pro Lys Gln Tyr Lys His Tyr Cys Ile Lys
111 35 40 45

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## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/857,815A

DATE: 03/18/2002

TIME: 15:23:24

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Output Set: N:\CRF3\03182002\I857815A.raw

112 Gly Arg Cys Arg Phe Val Val Ala Glu Gln Thr Pro Ser Cys Val Cys  
 113 50 55 60  
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 119 <212> TYPE: PRT  
 120 <213> ORGANISM: Artificial sequence  
 122 <220> FEATURE:  
 123 <223> OTHER INFORMATION: amino acid sequence of betacellulin mutein (BTC 1-76, 78)  
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 129 20 25 30  
 130 Gly His Phe Ser Arg Cys Pro Lys Gln Tyr Lys His Tyr Cys Ile Lys  
 131 35 40 45  
 132 Gly Arg Cys Arg Phe Val Val Ala Glu Gln Thr Pro Ser Cys Val Cys  
 133 50 55 60  
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 139 <212> TYPE: PRT  
 140 <213> ORGANISM: Artificial sequence  
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 143 <223> OTHER INFORMATION: amino acid sequence of betacellulin mutein (BTC 1-77, 79,

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145 <400> SEQUENCE: 8  
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 148 Asp Pro Glu Glu Asn Cys Ala Ala Thr Thr Thr Gln Ser Lys Arg Lys  
 149 20 25 30  
 150 Gly His Phe Ser Arg Cys Pro Lys Gln Tyr Lys His Tyr Cys Ile Lys  
 151 35 40 45  
 152 Gly Arg Cys Arg Phe Val Val Ala Glu Gln Thr Pro Ser Cys Val Cys  
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 159 <212> TYPE: PRT  
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 163 <223> OTHER INFORMATION: amino acid sequence of betacellulin mutein (BTC 1-77, 80)  
 165 <400> SEQUENCE: 9  
 166 Asp Gly Asn Ser Thr Arg Ser Pro Glu Thr Asn Gly Leu Leu Cys Gly  
 167 1 5 10 15  
 168 Asp Pro Glu Glu Asn Cys Ala Ala Thr Thr Thr Gln Ser Lys Arg Lys  
 169 20 25 30

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/857,815A

DATE: 03/18/2002

TIME: 15:23:24

Input Set : A:\SEQ01044rev2.txt

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170 Gly His Phe Ser Arg Cys Pro Lys Gln Tyr Lys His Tyr Cys Ile Lys  
 171 35 40 45  
 172 Gly Arg Cys Arg Phe Val Val Ala Glu Gln Thr Pro Ser Cys Val Cys  
 173 50 55 60  
 174 Asp Glu Gly Tyr Ile Gly Ala Arg Cys Glu Arg Val Asp Phe  
 175 65 70 75

177 &lt;210&gt; SEQ ID NO: 10

178 &lt;211&gt; LENGTH: 49

179 &lt;212&gt; TYPE: PRT

180 &lt;213&gt; ORGANISM: Artificial sequence

182 &lt;220&gt; FEATURE:

183 &lt;223&gt; OTHER INFORMATION: amino acid sequence of betacellulin mutein (BTC 31-76, 78-

80)

185 &lt;400&gt; SEQUENCE: 10

186 Arg Lys Gly His Phe Ser Arg Cys Pro Lys Gln Tyr Lys His Tyr Cys  
 187 1 5 10 15  
 188 Ile Lys Gly Arg Cys Arg Phe Val Val Ala Glu Gln Thr Pro Ser Cys  
 189 20 25 30  
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192 Tyr

194 &lt;210&gt; SEQ ID NO: 11

195 &lt;211&gt; LENGTH: 48

196 &lt;212&gt; TYPE: PRT

197 &lt;213&gt; ORGANISM: Artificial sequence

199 &lt;220&gt; FEATURE:

200 &lt;223&gt; OTHER INFORMATION: amino acid sequence of betacellulin mutein (BTC 31-76, 78,

79)

202 &lt;400&gt; SEQUENCE: 11

203 Arg Lys Gly His Phe Ser Arg Cys Pro Lys Gln Tyr Lys His Tyr Cys  
 204 1 5 10 15  
 205 Ile Lys Gly Arg Cys Arg Phe Val Val Ala Glu Gln Thr Pro Ser Cys  
 206 20 25 30  
 207 Val Cys Asp Glu Gly Tyr Ile Gly Ala Arg Cys Glu Arg Val Leu Phe  
 208 35 40 45

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211 &lt;211&gt; LENGTH: 47

212 &lt;212&gt; TYPE: PRT

213 &lt;213&gt; ORGANISM: Artificial sequence

215 &lt;220&gt; FEATURE:

216 &lt;223&gt; OTHER INFORMATION: amino acid sequence of betacellulin mutein (BTC 31-76, 78)

218 &lt;400&gt; SEQUENCE: 12

219 Arg Lys Gly His Phe Ser Arg Cys Pro Lys Gln Tyr Lys His Tyr Cys  
 220 1 5 10 15  
 221 Ile Lys Gly Arg Cys Arg Phe Val Val Ala Glu Gln Thr Pro Ser Cys  
 222 20 25 30  
 223 Val Cys Asp Glu Gly Tyr Ile Gly Ala Arg Cys Glu Arg Val Leu  
 224 35 40 45

226 &lt;210&gt; SEQ ID NO: 13

227 &lt;211&gt; LENGTH: 49

228 &lt;212&gt; TYPE: PRT

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/857,815A

DATE: 03/18/2002

TIME: 15:23:24

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229 <213> ORGANISM: Artificial sequence  
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234 <400> SEQUENCE: 13  
 235 Arg Lys Gly His Phe Ser Arg Cys Pro Lys Gln Tyr Lys His Tyr Cys  
 236 1 5 10 15  
 237 Ile Lys Gly Arg Cys Arg Phe Val Val Ala Glu Gln Thr Pro Ser Cys  
 238 20 25 30  
 239 Val Cys Asp Glu Gly Tyr Ile Gly Ala Arg Cys Glu Arg Val Asp Phe  
 240 35 40 45  
 241 Tyr

243 <210> SEQ ID NO: 14  
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 245 <212> TYPE: PRT  
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 254 Ile Lys Gly Arg Cys Arg Phe Val Val Ala Glu Gln Thr Pro Ser Cys  
 255 20 25 30  
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 257 35 40 45

259 <210> SEQ ID NO: 15  
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 266 aactgtgcag ctaccaccac acaatcaaag cggaaaggcc acttctctag gtgcccgaag 120  
 267 caatacaagc attactgcat caaagggaga tgccgcttcg tgggtggccga gcagacgccc 180  
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 273 <213> ORGANISM: Human  
 275 <400> SEQUENCE: 16  
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 277 aactgtgcag ctaccaccac acaatcaaag cggaaaggcc acttctctag gtgcccgaag 120  
 278 caatacaagc attactgcat caaagggaga tgccgcttcg tgggtggccga gcagacgccc 180  
 279 tcctgtgtct gtgatgaagg ctacattgga gcaaggtgtg agagagtt 228

281 <210> SEQ ID NO: 17  
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 287 cggaaaggcc acttctctag gtgcccgaag caatacaagc attactgcat caaagggaga 60  
 288 tgccgcttcg tgggtggccga gcagacgccc tcctgtgtct gtgatgaagg ctacattgga 120

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/857,815A

DATE: 03/18/2002

TIME: 15:23:25

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L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date

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L:550 M:282 W: Numeric Field Identifier Missing, <212> is required.